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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) A method of enabling user interaction with computer software ~~running in a computer system~~ via:

an interface surface containing information relating to <u>at least one interactive element and to</u> the computer software and ~~including~~ <u>having disposed therein or thereon</u> coded data indicative of <u>an identity of the interface surface and of a plurality of reference points of the surface</u> ~~at least one interactive element relating to the computer software~~; ~~and~~

a sensing device which: contains identifying data indicative of an identity of the user; and, when placed in an operative position relative to the interface surface, senses <u>at least some of the coded data and generates</u> indicating data, indicative of the <u>identity of the interface surface and of a position of the sensing device relative to the interface surface</u> ~~at least one interactive element~~, using at least some of the <u>sensed</u> coded data; <u>and</u>

<u>a computer system running the computer software;</u>

the method including the steps of, in the computer system:

(a)   receiving the identifying data from the sensing device;

(b)   receiving the indicating data from the sensing device;

(c)   identifying the at least one interactive element from the indicating data;

(d)   identifying user data from the identifying data; and

(e)   operating the computer software at least partly in reliance on the user data, and in accordance with instructions associated with the at least one interactive element.

2.   (Currently Amended) A method of enabling user interaction with computer software running in a computer system, the method including the steps of:

providing an interface surface containing~~:~~ information relating to <u>at least one interactive element and to</u> the computer software~~;~~ and <u>having disposed therein or thereon</u> coded data indicative of ~~at least one interactive element relating to the computer software~~<u>an identity of the interface surface and of a plurality of reference points of the interface surface</u>;

                                                    3

and

      in the computer system:

(a)   receiving identifying data from a sensing device, wherein the sensing device contains the identifying data and the identifying data is indicative of an identity of the user;

(b)   receiving ~~the~~ indicating data from the sensing device, wherein the sensing device, when placed in an operative position relative to the interface surface, senses <u>at least some of the coded data</u> and generates the indicating data using at least some of the <u>sensed</u> coded data, the indicating data being indicative of the ~~at least one interactive element~~<u>identity of the interface surface and of a position of the sensing device relative to the interface surface</u>;

(c)   identifying the at least one interactive element from the indicating data;

(d)   identifying user data from the identifying data; and

(e)   operating the computer software at least partly in reliance on the user data, and in accordance with instructions associated with the at least one interactive element.

3.   (Original) A method according to claim 1 or 2, wherein the user data is identified from both the identifying data and the indicating data.

4.   (Cancelled)

5.   (Currently Amended) A method ~~according to claim 4~~<u>of claim 1 or claim 2</u>, wherein the sensing device generates movement data indicative of its movement relative to the interface surface, the method including the step of receiving, in the computer system, the movement data.

6.   (Original) A method according to any one of claims 1, 2 or 5, wherein the interactive element is a hyperlink element relating to the computer software, the method including the step of effecting, in the computer system, an operation associated with the hyperlink element.

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7.   (Original) A method according to claim 6, including the step of sending, in the computer system, data to the computer software indicative of the hyperlink element.

8.   (Original) A method according to claim 7, including the step of sending, in the computer system, data to the computer software indicative of a name and/or value of at least one field related to the computer software.

9.   (Original) A method according to claim 8, including the step of sending, in the computer system, data to the computer software indicative of a selected object.

10.   (Original) A method according to claim 1 or 2, wherein the interactive element is a checkbox field relating to the computer software, the method including the steps of identifying, in the computer system, that the user has entered a hand-drawn mark by means of the sensing device and effecting, in the computer system, an operation associated with the checkbox field.

11.   (Original) A method according to claim 10, including the step of associating, in the computer system, a true value with the checkbox field.

12.   (Original) A method according to claim 10, including the step of sending, in the computer system, data to the computer software indicative of at least the checkbox field.

13.   (Original) A method according to claim 1 or 2, wherein the interactive element is a text field relating to the computer software, the method including the steps of identifying, in the computer system, that the user has entered handwritten text data by means of the sensing device and effecting, in the computer system, an operation associated with the text field.

14.   (Original) A method according to claim 13, including the step of converting, in the computer system, the handwritten text data to computer text.

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15.   (Original) A method according to claim 14, including the step of associating, in the computer system, the computer text with the text field.

16.   (Original) A method according to any one of claims 13, including the step of sending, in the computer system, data to the computer software indicative of at least the text field.

17.   (Original) A method according to claim 1 or 2, wherein the interactive element is a signature field relating to the computer software, the method including the steps of identifying, in the computer system, that the user has entered a handwritten signature by means of the sensing device and effecting, in the computer system, an operation associated with the signature field.

18.   (Original) A method according to claim 17, including the step of verifying, in the computer system, that the signature is that of the user.

19.   (Original) A method according to claim 18, including the step of generating, in the computer system and using a signature key of the user, a digital signature of at least data indicative of a name and/or value of at last one field related to the computer software.

20.   (Original) A method according to claim 19, including the step of associating, in the computer system, the digital signature with the signature field.

21.   (Original) A method according to claim 17, including the step of sending, in the computer system, data to the computer software indicative of at least the signature field.

22.   (Original) A method according to claim 1 or 2, wherein the interactive element is a drawing field related to the computer software, the method including the steps of identifying, in the computer system, that the user has entered a hand-drawn picture by means of the sensing device and effecting, in the computer system, an operation associated with the

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drawing field.

23.   (Original) A method according to claim 22, including the step of activating, in the computer system, a hyperlink.

24.   (Original) A method according to claim 22, including the step of sending, in the computer system, data to the computer software indicative of at least the drawing field.

25.   (Original) A method according to claim 1 or 2, including the step of printing the interface surface on demand.

26.   (Original) A method according to claim 25, including the step of substantially simultaneously printing the interface surface and the coded data onto a substrate.

27.   (Original) A method according to claim 26, wherein the coded data is printed onto the surface to be substantially invisible to an unaided human eye.

28.   (Original) A method according to claim 1 or 2, including the step of retaining a retrievable record of each interface surface printed, the interface surface being retrievable using the identity contained in its associated coded data.

29.   (Original) A method according to claim 1 or 2, including the step of distributing a plurality of the interface surfaces using a mixture of multicast and pointcast communications protocols.

30.   (Currently Amended) A method according to claim 1 or 2, wherein the identifying data contained in the sensing device containing an identification means that imparts a unique identity to the sensing device and identifies it as belonging to a particular user, and wherein the method includes the step of monitoring, in the computer system, said identity.

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31. (Original) A method according to claim 1 or 2, including the step of providing sufficient information relating to the computer software in the interface surface to eliminate the need for a separate display device.

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32. (Currently Amended) A method according to claim 1 or 2 25, wherein the interface surface is printed on multiple pages, the method including the step of binding the pages.

33. (Original) A method according to claim 1 or 2, wherein the coded data includes at least one tag, each tag being indicative of the identity of the region and the position of the tag within the region.

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34. (Original) A method according to claim 33, wherein each of the tags include:

first identity data defining a relative position of that tag; and

second identity data identifying the surface.

35. (Original) A method according to claim 33 or 34, wherein the surface is defined by a substrate.

36. (Original) A method according to claim 35, wherein the substrate is laminar.

37. (Original) A method according to claim 33 or 34, wherein the tags are disposed at predetermined positions on the surface.

38. (Original) A method according to claim 33 or 34, wherein each of the tags includes at least one orientation feature for enabling a rotational orientation of the tag being read to be ascertained.

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39.   (Original) A method according to claim 38, wherein the at least one orientation feature is rotationally asymmetric.

40.   (Original) A method according to claim 39, wherein the at least one orientation feature is skewed along its major axis.

41.   (Original) A method according to claim 33 or 34, wherein each tag includes a plurality of tag elements, the first and second identity data each being defined by a plurality of the elements.

42.   (Original) A method according to claim 41, wherein the tag elements are disposed in one or more arcuate bands around a central region of each tag.

43.   (Original) A method according to claim 33 or 34, wherein the tags are not substantially visible to an average unaided human eye under daylight or ambient lighting conditions.

44.   (Original) A method according to claim 33 or 34, wherein the tags are slightly visible to an average unaided human eye under daylight or ambient lighting conditions.

45.   (Original) A method according to claim 33 or 34, wherein the tags are visible to an average unaided human eye under daylight or ambient lighting conditions.

46.   (Original) A method according to claim 33 or 34, wherein the tags are printed onto the surface by means of a printer.

47,   (Original) A method according to claim 46, wherein the printer is an ink printer.

48.   (Original) A method according to claim 47, wherein the tags are printed using ink

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that is absorbent or reflective in the ultraviolet spectrum or the infrared spectrum.

49.   (Original) A method according to claim 33 or 34, wherein at least a plurality of the tags are disposed stochastically upon the surface.

50.   (Original) A method according to claim 33 or 34, wherein the tags are disposed in a regular array on the surface.

51.   (Original) A method according to claim 50, wherein the array is triangular.

52.   (Original) A method according to any one of claims 1, 2, 7 to 9, 1, 33 or 34, wherein the coded data is machine readable, and the information represented by the coded data is substantially inscrutable to an unaided human.

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53.   (Currently Amended) A system for enabling user interaction with computer software running in a computer system, via:

an interface surface containing information relating to at least one interactive element and to the computer software and including having disposed therein or thereon coded data indicative of an identity of the interface surface and of a plurality of reference points of the interface surface at least one interactive element relating to the computer software; and

a sensing device which: contains identifying data indicative of an identity of the user; and, when placed in an operative position relative to the interface surface, senses at least some of the coded data and generates indicating data, indicative of the identity of the interface surface and of a position of the sensing device relative to the interface surface at least one interactive element, using at least some of the sensed coded data; and

a computer system running the computer software;

the system being configured to, in the computer system:

(a)   receive the identifying data from the sensing device;

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(b) receive the indicating data from the sensing device;

(c) identify the at least one interactive element from the indicating data;

(d) identify user data from the identifying data; and

(e) operate the computer software at least partly in reliance on the user data, and in accordance with instructions associated with the at least one interactive element.

~~54~~. (Currently Amended) A system for enabling user interaction with computer software ~~running in a computer system~~, the system including:

an interface surface containing information relating to <u>at least one interactive</u> <u>element and to the</u> computer software and ~~including~~ <u>having disposed therein or thereon</u> coded data indicative of <u>an identity of the interface surface and of a plurality of reference</u> <u>points of the interface surface</u> ~~at least one interactive element relating to the computer~~ ~~software;~~ <u>and</u>

<u>a computer system running the computer software;</u>

the system being configured to, in the computer system:

(a) receive identifying data from a sensing device, the identifying data being: indicative of an identity of the user; and contained in the sensing device;

(b) receive indicating data from the sensing device, the indicating data being indicative of the ~~at least one interactive element~~ <u>identity of the interface surface and of a position of the</u> <u>sensing device relative to the interface surface</u>, wherein, when placed in an operative position relative to the interface surface, the sensing device senses <u>at least some of the coded</u> <u>data and generates the</u> indicating data using at least some of the <u>sensed</u> coded data;

(c) identify the at least one interactive element from the indicating data;

(d) identify user data from the identifying data; and

(e) operate the computer software at least partly in reliance on the user data, and in accordance with instructions associated with the at least one interactive element.

~~55~~. (Original) A system according to claim ~~53~~ or ~~54~~, wherein the user data is identified from both the identifying data and the indicating data.

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56.   (Cancelled).

57.   (Original) A system according to claim 53 or 54, wherein the sensing device generates movement data indicative of its movement relative to the interface surface, the method including the step of receiving, in the computer system, the movement data.

58.   (Original) A system according to any one of claims 53 to 55, the system further including the sensing device.

59.   (Original) A system according to claim 58, wherein the sensing device is configured to sense its movement relative to the interface surface.

60.   (Original) A system according to any one of claims 53 to 55, wherein the interactive element is a hyperlink element relating to the computer software, the method including the step of effecting, in the computer system, an operation associated with the hyperlink element.

61.   (Original) A system according to claim 60, including the step of sending, in the computer system, data to the computer software indicative of the hyperlink element.

62.   (Original) A system according to claim 61, including the step of sending, in the computer system, data to the computer software indicative of a name and/or value of at least one field related to the computer software.

63.   (Original) A system according to claim 62, including the step of sending, in the computer system, data to the computer software indicative of a selected object.

64.   (Original) A system according to claim 53 or 54, wherein the interactive element is

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a checkbox field relating to the computer software, the method including the steps of identifying, in the computer system, that the user has entered a hand-drawn mark by means of the sensing device and effecting, in the computer system, an operation associated with the checkbox field.

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~65.   (Original) A system according to claim 64, including the step of associating, in the computer system, a true value with the checkbox field.

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~66.   (Original) A system according to claim 64, including the step of sending, in the computer system, data to the computer software indicative of at least the checkbox field.

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~67.   (Original) A system according to claim 53 or 54, wherein the interactive element is a text field relating to the computer software, the method including the steps of identifying, in the computer system, that the user has entered handwritten text data by means of the sensing device and effecting, in the computer system, an operation associated with the text field.

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~68.   (Original) A system according to claim 67, including the step of converting, in the computer system, the handwritten text data to computer text.

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~69.   (Original) A system according to claim 68, including the step of associating, in the computer system, the computer text with the text field.

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~70.   (Original) A system according to claim 67, including the step of sending, in the computer system, data to the computer software indicative of at least the text field.

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~71.   (Original) A system according to claim 53 or 54, wherein the interactive element is a signature field relating to the computer software, the method including the steps of identifying, in the computer system, that the user has entered a handwritten signature by means of the sensing device and effecting, in the computer system, an operation associated

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with the signature field.

72.   (Original) A system according to claim 71, including the step of verifying, in the computer system, that the signature is that of the user.

73.   (Original) A system according to claim 72, including the step of generating, in the computer system and using a signature key of the user, a digital signature of at least data indicative of a name and/or value of at last one field related to the computer software.

74.   (Original) A system according to claim 73, including the step of associating, in the computer system, the digital signature with the signature field.

75.   (Original) A system according to claim 71, including the step of sending, in the computer system, data to the computer software indicative of at least the signature field.

76.   (Original) A system according to claim 53 or 54, wherein the interactive element is a drawing field related to the computer software, the method including the steps of identifying, in the computer system, that the user has entered a hand-drawn picture by means of the sensing device and effecting, in the computer system, an operation associated with the drawing field.

77.   (Original) A system according to claim 76, including the step of activating, in the computer system, a hyperlink.

78.   (Original) A system according to claim 76, including the step of sending, in the computer system, data to the computer software indicative of at least the drawing field.

79.   (Original) A system according to claim 53 or 54, including the step of printing the interface surface on demand.

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80.   (Original) A system according to claim 79, including the step of substantially simultaneously printing the interface surface and the coded data onto a substrate.

82 *81*

81.   (Original) A system according to claim 80, wherein the coded data is printed onto the surface to be substantially invisible to an unaided human eye.

84 *54 55*

82.   (Original) A system according to claim 53 or 54, including the step of retaining a retrievable record of each interface surface printed, the interface surface being retrievable using the identity contained in its associated coded data.

85 *54 54*

C1 cont

83.   (Original) A system according to claim 53 or 54, including the step of distributing a plurality of the interface surfaces using a mixture of multicast and pointcast communications protocols.

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84.   (Currently Amended) A system according to claim 53 or 54, wherein the identifying data contained in the sensing device containing an identification means that imparts a unique identity to the sensing device and identifies it as belonging to a particular user, and wherein the method includes the step of monitoring, in the computer system, said identity.

87 *54 55*

85.   (Original) A system according to claim 53 or 54, including the step of providing sufficient information relating to the computer software in the interface surface to eliminate the need for a separate display device.

83 *80*

86.   (Currently Amended) A system according to claim 53 or 5479, wherein the interface surface is printed on multiple pages, the method including the step of binding the pages.

88 *54 55*

87.   (Original) A system according to claim 53 or 54, wherein the coded data includes at

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least one tag, each tag being indicative of the identity of the region and the position of the tag within the region.

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88.   (Original) A system according to claim 33, wherein each of the tags include:

first identity data defining a relative position of that tag; and

second identity data identifying the surface.

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89.   (Original) A system according to claim 87 or 88, wherein the surface is defined by a substrate.

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90.   (Original) A system according to claim 89, wherein the substrate is laminar.

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91.   (Original) A system according to claim 87 or 88, wherein the tags are disposed at predetermined positions on the surface.

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92.   (Original) A system according to claim 87 or 88, wherein each of the tags includes at least one orientation feature for enabling a rotational orientation of the tag being read to be ascertained.

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93.   (Original) A system according to claim 92, wherein the at least one orientation feature is rotationally asymmetric.

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94.   (Original) A system according to claim 93, wherein the at least one orientation feature is skewed along its major axis.

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95.   (Original) A system according to claim 87 or 88, wherein each tag includes a plurality of tag elements, the first and second identity data each being defined by a plurality of the elements.

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96. (Original) A system according to claim 95, wherein the tag elements are disposed in one or more arcuate bands around a central region of each tag.

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97. (Original) A system according to claim 87 or 88, wherein the tags are not substantially visible to an average unaided human eye under daylight or ambient lighting conditions.

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C1 cont

98. (Original) A system according to claim 87 or 88, wherein the tags are slightly visible to an average unaided human eye under daylight or ambient lighting conditions.

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99. (Original) A system according to claim 87 or 88, wherein the tags are visible to an average unaided human eye under daylight or ambient lighting conditions.

101

100. (Original) A system according to claim 87 or 88, wherein the tags are printed onto the surface by means of a printer.

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101. (Original) A system according to claim 100, wherein the printer is an ink printer.

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102. (Original) A system according to claim 101, wherein the tags are printed using ink that is absorbent or reflective in the ultraviolet spectrum or the infrared spectrum.

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103. (Original) A system according to claim 87 or 88, wherein at least a plurality of the tags are disposed stochastically upon the surface.

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104. (Original) A system according to claim 87 or 88, wherein the tags are disposed in a regular array on the surface.

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105.   (Original) A system according to claim 104, wherein the array is triangular.

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107 106.   (Original) A system according to any one of claims 53, 54, 87 or 88, wherein the coded data is machine readable, and the information represented by the coded data is substantially inscrutable to an unaided human.

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107.   (Original) A system according to claim 53 to 54, wherein the identity data defines a user or group of users authorised to use the stylus.

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108.   (Original) A method according to claim 1 or 2, wherein the identity data defines a user or group of users authorised to use the stylus.

109.   (Currently Amended) A method of enabling user interaction with computer software running in a computer system via:

an interface surface containing information relating to at least one interactive element and to the computer software and including having disposed therein or thereon coded data indicative of an identity of the interface surface and of a plurality of reference points of the interface surface at least one interactive element relating to the computer software; and

a sensing device which: contains identifying data indicative of an identity of the user; and, when placed in an operative position relative to the interface surface, generates indicating data based at least partially on sensing at least some of the coded data, the indicating data being indicative of the at least one interactive element identity of the interface surface and of a position of the sensing device relative to the interface surface; and

a computer system running the interface surface:

the method including the steps of, in the computer system:

(a)   receiving the identifying data from the sensing device;

(b)   receiving the indicating data from the sensing device;

(c)   identifying the at least one interactive element from the indicating data;

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(d)   identifying user data from the identifying data; and

(e)   operating the computer software at least partly in reliance on the user data, and in accordance with instructions associated with the at least one interactive element.

110.   (Currently Amended) A method of enabling user interaction with computer software running in a computer system, the method including the steps of:

providing an interface surface containing:

————————information relating to at least one interactive element and to the computer software; and having disposed therein or thereon

————————coded data indicative of an identity of the interface surface and of a plurality of reference points of the interface surfaceat least one interactive element relating to the computer software; and

in the computer system:

(a)   receiving identifying data from a sensing device, wherein the sensing device contains the identifying data and the identifying data is indicative of an identity of the user;

(b)   receiving the indicating data from the sensing device, wherein the sensing device, when placed in an operative position relative to the interface surface, generates the indicating data based at least partially on sensing at least some of the coded data, the indicating data being indicative of the at least one interactive elementidentity of the interface surface and of a position of the sensing device relative to the interface surface;

(c)   identifying the at least one interactive element from the indicating data;

(d)   identifying user data from the identifying data; and

(e)   operating the computer software at least partly in reliance on the user data, and in accordance with instructions associated with the at least one interactive element.

111.   (Previously presented) A method according to claim 109 or 110, wherein the user data is identified from both the identifying data and the indicating data.

112.   (Cancelled)

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~~112~~113. (Currently Amended) A method according to claim ~~112~~109 or 110, wherein the sensing device generates movement data indicative of its movement relative to the interface surface, the method including the step of receiving, in the computer system, the movement data.

114. (Previously presented) A method according to any one of claims 109, 110 or 113, wherein the interactive element is a hyperlink element relating to the computer software, the method including the step of effecting, in the computer system, an operation associated with the hyperlink element.

115. (Previously presented) A method according to claim 114, including the step of sending, in the computer system, data to the computer software indicative of the hyperlink element.

116. (Previously presented) A method according to claim 115, including the step of sending, in the computer system, data to the computer software indicative of a name and/or value of at least one field related to the computer software.

117. (Previously presented) A method according to claim 116, including the step of sending, in the computer system, data to the computer software indicative of a selected object.

118. (Previously presented) A method according to claim 109 or 110, wherein the interactive element is a checkbox field relating to the computer software, the method including the steps of identifying, in the computer system, that the user has entered a hand-drawn mark by means of the sensing device and effecting, in the computer system, an operation associated with the checkbox field.

119. (Previously presented) A method according to claim 118, including the step of

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associating, in the computer system, a true value with the checkbox field.

120.   (Previously presented) A method according to claim 118, including the step of sending, in the computer system, data to the computer software indicative of at least the checkbox field.

121.   (Previously presented) A method according to claim 109 or 110, wherein the interactive element is a text field relating to the computer software, the method including the steps of identifying, in the computer system, that the user has entered handwritten text data by means of the sensing device and effecting, in the computer system, an operation associated with the text field.

122.   (Previously presented) A method according to claim 121, including the step of converting, in the computer system, the handwritten text data to computer text.

123.   (Previously presented) A method according to claim 122, including the step of associating, in the computer system, the computer text with the text field.

124.   (Previously presented) A method according to any one of claims 121, including the step of sending, in the computer system, data to the computer software indicative of at least the text field.

125.   (Previously presented) A method according to claim 109 or 110, wherein the interactive element is a signature field relating to the computer software, the method including the steps of identifying, in the computer system, that the user has entered a handwritten signature by means of the sensing device and effecting, in the computer system, an operation associated with the signature field.

126.   (Previously presented) A method according to claim 125, including the step of verifying, in the computer system, that the signature is that of the user.

127.   (Previously presented) A method according to claim 126, including the step of generating, in the computer system and using a signature key of the user, a digital signature of at least data indicative of a name and/or value of at last one field related to the computer software.

128.   (Previously presented) A method according to claim 127, including the step of associating, in the computer system, the digital signature with the signature field.

129.   (New) The method of claim 5 in which the at least one interactive element is associated with at least one zone of the interface surface and in which the method includes identifying, in the computer system and from the movement data:

the zone relative to which the sensing device is moved; and

the at least one interactive element associated with that zone.

130.   (New) The system of claim 57 in which the at least one interactive element is associated with at least one zone of the interface surface and in which the computer system is adapted to identify, from the movement data:

the zone relative to which the sensing device is moved; and

the at least one interactive element associated with that zone.

131.   (New) The method of claim 113 in which the at least one interactive element is associated with at least one zone of the interface surface and in which the method includes identifying, in the computer system and from the movement data:

the zone relative to which the sensing device is moved; and

the at least one interactive element associated with that zone.